

Department of Energy Richland Operations Office



Hanford Site Update

National Contract Management Association

Dave Brockman, Manager

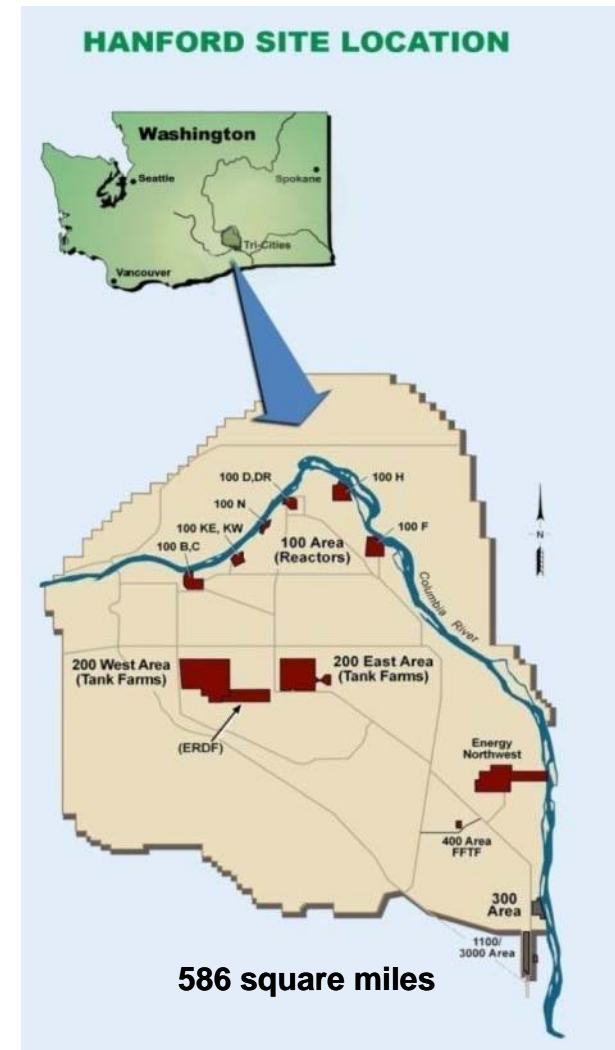
Richland Operations Office, U.S. Department of Energy

October 8, 2009

The Hanford Site

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- 586 square miles
(half the size of Rhode Island)
- 50 miles of the Columbia River runs through Hanford
- Constructed in WWII as part of the Manhattan Project
- Former mission: Produce plutonium
- Produced approx. two-thirds of nation's supply of plutonium, 1944-1989
- Peak employment was 50,000 during construction
- Current employment: 11,500



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20 Years of Cleanup Progress

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- We have made progress in reducing environmental risk and have eliminated some of the most urgent risks
 - 2,300 tons of corroding spent nuclear fuel dried, moved to safe storage in the Central Plateau
 - 20 tons of unstable plutonium in various forms stabilized, packaged and shipped off site
 - Treating 50 million gallons of contaminated groundwater each month
 - 48,000 out of 70,000 drums worth of solid, radioactive waste (transuranic) retrieved
 - Demolished 187 out of 625 facilities along the Columbia River, 5 of 8 reactors placed in interim safe storage
 - Cleaned up 446 of approx. 800 waste sites along the Columbia River
 - Disposed of 8.5 million tons of waste in Environmental Restoration Disposal Facility



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the 2015 Vision

Hanford Site Cleanup

Safe and Effective Cleanup that Protects the Columbia River

- Reduces the Active Site Footprint of Cleanup to 75 Square Miles (586 → 75)
- Significantly Reduces Long-Term Mortgage Costs
- At Completion, Shifts Emphasis and Resources to Full Scale Cleanup of the Central Plateau (75 square miles)
- Reduces Costs by "Right Sizing" Hanford's Infrastructure via a Mission Support Contract
- Minimizes Injury to Natural Resources

N Area

- ✓ Interim Safe Storage of N Reactor Complete
- ✓ All N Area Final ROD Remedial Actions Complete and TSD Units Closed
- ✓ All N Area Groundwater Remedies Implemented
- ✓ 108 Facilities Demolished
- ✓ 61 Waste Sites Remediated
- ✓ ~157,000 Tons of Soil Removed

B & C Area

- ✓ Interim Safe Storage of C Reactor Complete
- ✓ B Reactor Designated as a Museum or Interim Safe Storage Complete
- ✓ All B & C Area Final ROD Remedial Actions Complete
- ✓ All B & C Area Groundwater Remedies Implemented
- ✓ 6 Facilities Demolished
- ✓ 40 Waste Sites Remediated
- ✓ ~381,000 Tons of Soil Removed

K Area

- ✓ K East Basin Demolished
- ✓ Interim Safe Storage of K East Reactor Complete
- ✓ K West Sludge Removed from the River Corridor
- ✓ Interim Safe Storage of K West Reactor Initiated
- ✓ All K Area Final ROD Remedial Actions Complete and TSD Units Closed with the exception of those associated with K West
- ✓ All K Area Groundwater Remedies Implemented
- ✓ 2,300 Tons of Scrap Nuclear Fuel Removed
- ✓ 109 Facilities Demolished
- ✓ 2 Waste Sites Remediated
- ✓ ~361,000 Tons of Soil Removed

Plutonium Finishing Plant Complex

- ✓ All Special Nuclear Material Shipped Off-site
- ✓ Slightly Irradiated Fuel Shipped to the Canister Storage Building for Safe Guarding
- ✓ PFP Complex Reduced to Slab on Grade
- ✓ 18 Facilities Demolished

400 Area

- ✓ Fast Flux Test Facility in Surveillance and Maintenance

D & H Area

- ✓ Interim Safe Storage of D, DR, and H Reactors Complete
- ✓ All D & H Area Final ROD Remedial Actions Complete
- ✓ All D & H Area Groundwater Remedies Implemented
- ✓ 16 Facilities Demolished
- ✓ 56 Waste Sites Remediated
- ✓ ~1,700,000 Tons of Soil Removed

IU2 & IU6 Areas

- ✓ Interim Safe Storage of F Reactor Complete
- ✓ All IU2 & IU6 Area Final ROD Remedial Actions Complete
- ✓ All IU2 & IU6 Area Final ROD Groundwater Remedial Actions Complete
- ✓ 1 Facility Demolished
- ✓ 50 Waste Sites Remediated
- ✓ ~962,000 Tons of Soil Removed

Central Plateau Cleanup

- ✓ All 200 West Carbon Tetrachloride, Uranium and Technetium 99 Groundwater Remedies Implemented
- ✓ Conduct Additional Cleanup as Funds Become Available

300 Area





- ✓ All 300 Area Final ROD Remedial Actions Complete and TSD Units Closed
- ✓ All 300 Area Groundwater Remedies Implemented
- ✓ 186 Facilities Demolished
- ✓ 95 Waste Sites Remediated
- ✓ ~923,000 Tons of Soil Removed
- ✓ Final Remediation of 618-10 & 618-11 Burial Grounds Complete

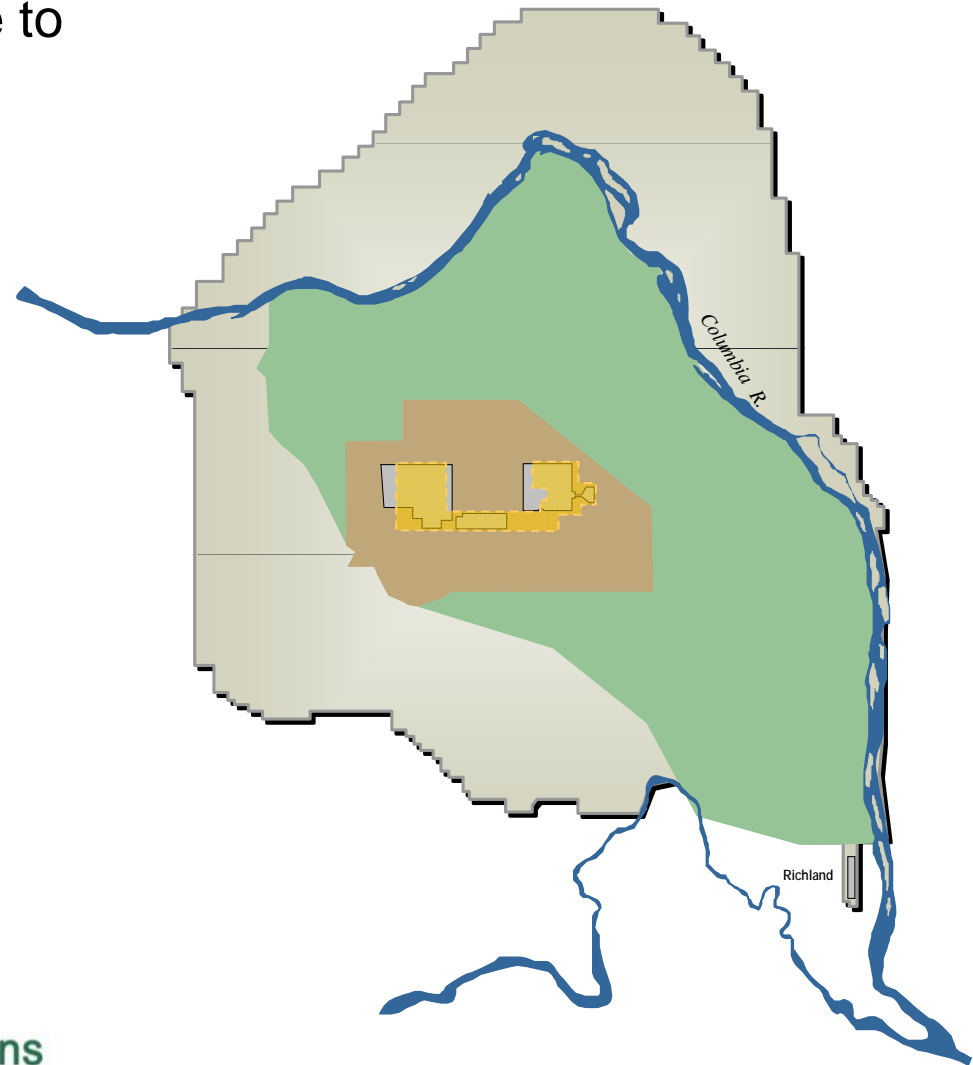


Strategy for Cleanup – Shrinking the Cleanup Footprint

October 2009

- Go from 586-square-mile site to 10 square miles
- Work in four areas

-  River Corridor
(~210 sq. miles)
-  Central Plateau, Outer Zone
(~65 sq. miles)
-  Central Plateau, Inner Zone
(~10 sq. miles)
-  Hanford Reach National Monument
(~300 sq. miles, including
Arid Lands Ecology Reserve)



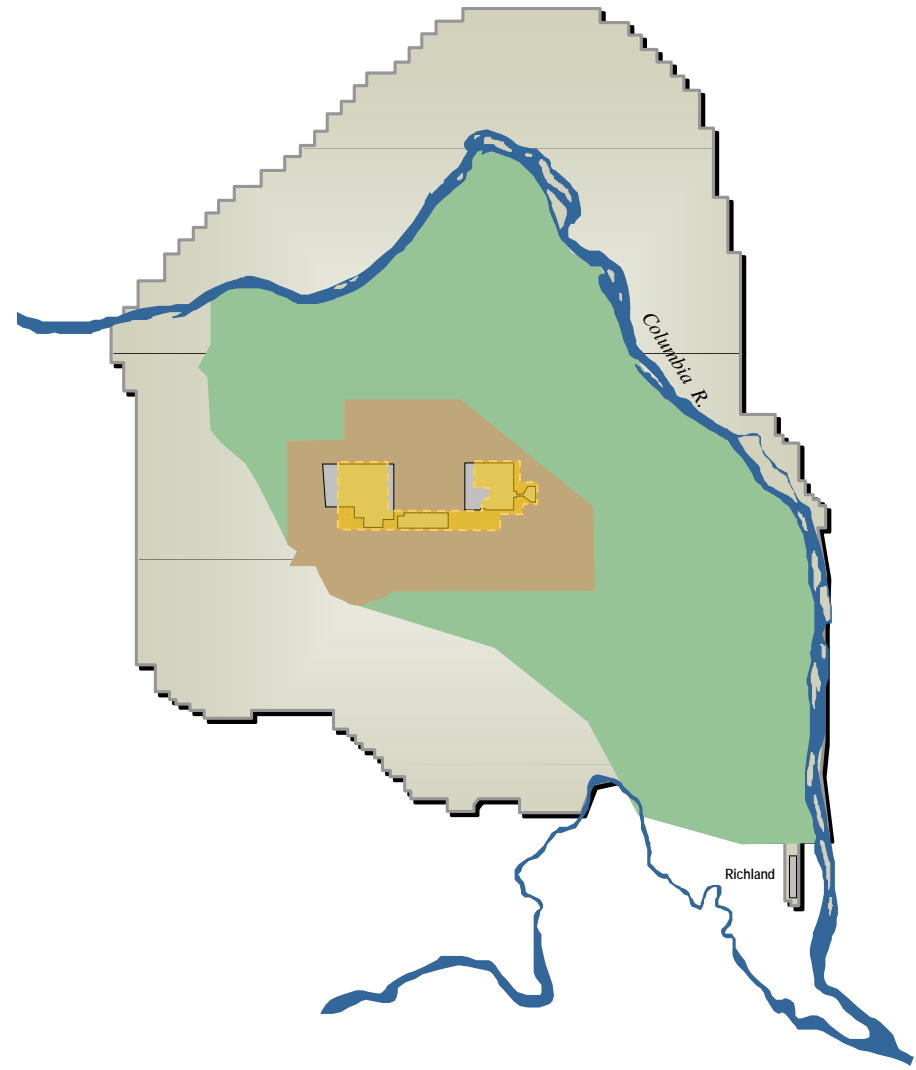
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Strategy for Cleanup – Priorities

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- Protect the Columbia River
- Contain/treat contaminated groundwater
- Demolish facilities, clean up waste sites in River Corridor
- Clean out and demolish the high-hazard Plutonium Finishing Plant
- Remediate waste sites in Central Plateau Outer Area
- Retrieve solid radioactive waste (transuranic waste)



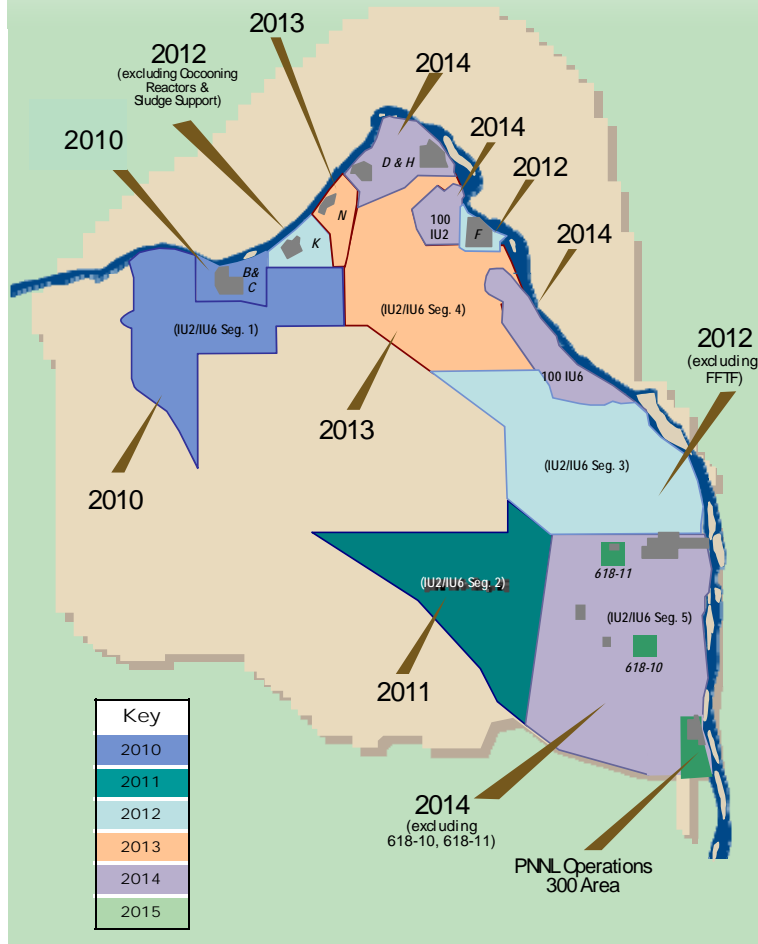
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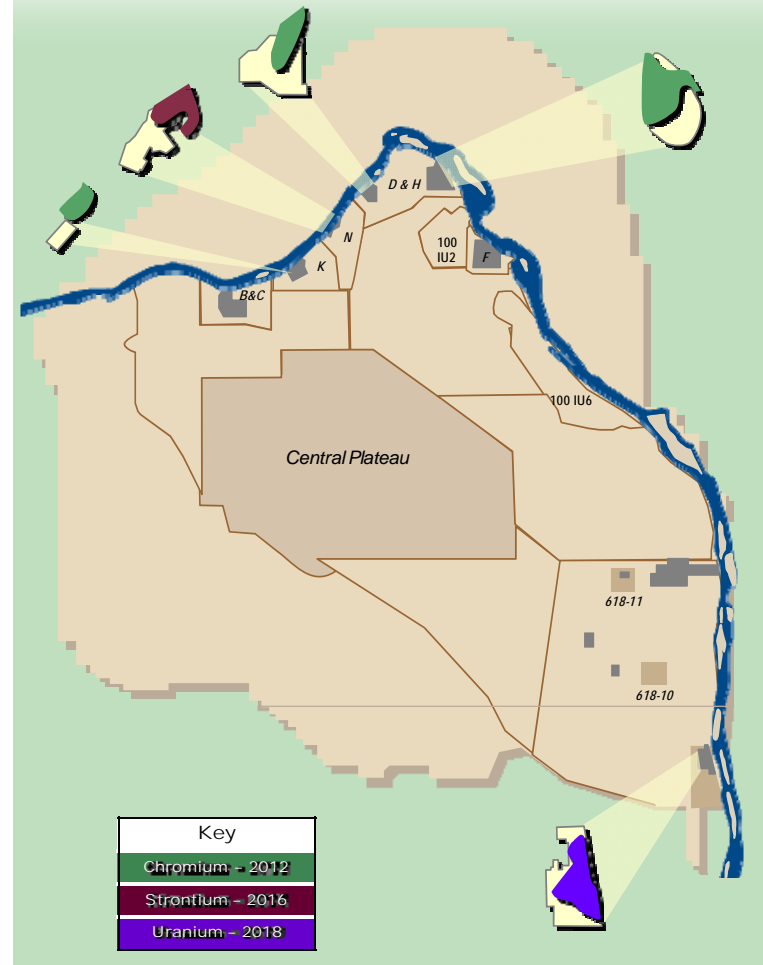
River Corridor Cleanup

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Waste Site and D&D Completion



Containment of Key Groundwater Contaminants



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Prime Contractors

October 2009

- Washington Closure Hanford: River Corridor Contractor
 - Remediating waste sites, demolishing facilities, operating the Environmental Restoration Disposal Facility
- CH2M HILL Plateau Remediation Company: Plateau Remediation Contractor
 - Remediating waste sites, cleaning out and demolishing facilities in 100-K Area and on Central Plateau
 - Retrieving and managing waste
 - Groundwater monitoring and remediation for the Site
- Mission Support Alliance: Integration Contractor
 - Information technology, fire and security, training



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Economic Recovery Funding

October 2009

- DOE developed proposals for stimulus funding to be spent beginning this year with four priorities in mind
 - Creating/saving jobs
 - Shrinking the footprint of active site cleanup
 - Saving on lifecycle costs
 - Maintaining compliance with Tri-Party Agreement
- Consistent with priorities of regulatory agencies, tribes, and stakeholders
- Work scope covered by existing prime contracts, and most work could commence immediately
- Hanford Site will save or create up to 4,000 jobs



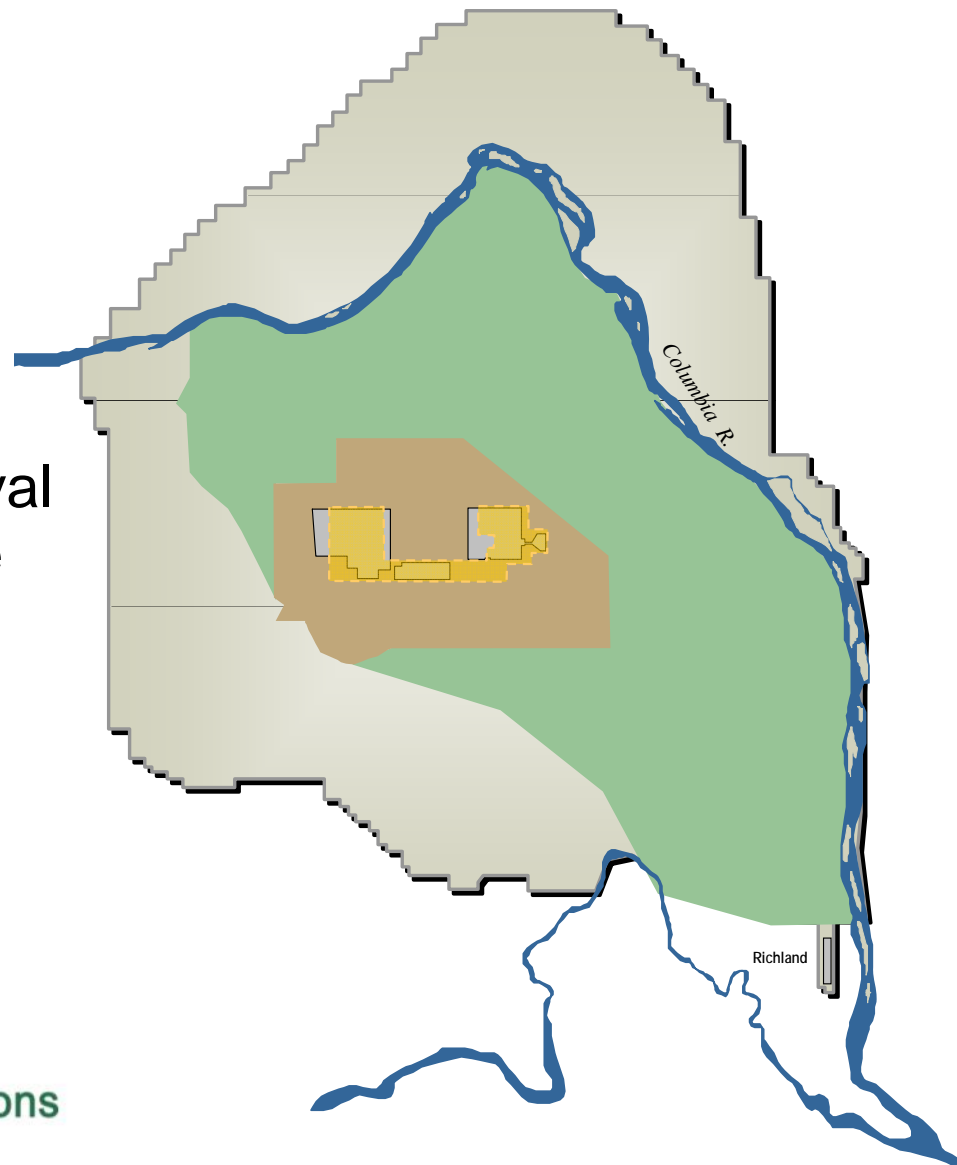
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Goals of Recovery Act Funding

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- Accelerate cleanup along the Columbia River
- Accelerate demolition of the Plutonium Finishing Plant
- Allow for continued retrieval of solid, radioactive waste
- Accelerate footprint reduction
- Accelerate lifecycle cost reduction



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Recovery Act Update

October 2009

DOE Richland Operation Office apportionment totals \$1.635 billion

- DOE authorized work to begin in April
- \$88.5 million spent through the end of August
- \$156.3 million in subcontracts awarded by DOE-Richland prime contractors for ARRA work
- Includes \$120.3 million in subcontracts to small businesses
- Approximately 3,000 people are working on Hanford ARRA projects funded through DOE-Richland (headcount of people at least partially funded through DOE-RL contracts including those needed to fill material and service orders through the end of August)
- Work on several major projects underway
- Projects are on or ahead of schedule, with some activities already completed



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Recovery Act Highlights

October 2009

- Finished retrieving last 300 of 1,300 deteriorating drums and containers from concrete vaults in 200 West Area



Suspect transuranic waste was stored in the TV-7 concrete vaults



Working at night to avoid daytime heat



Drums were over packed during retrieval operations because of deterioration of original containers



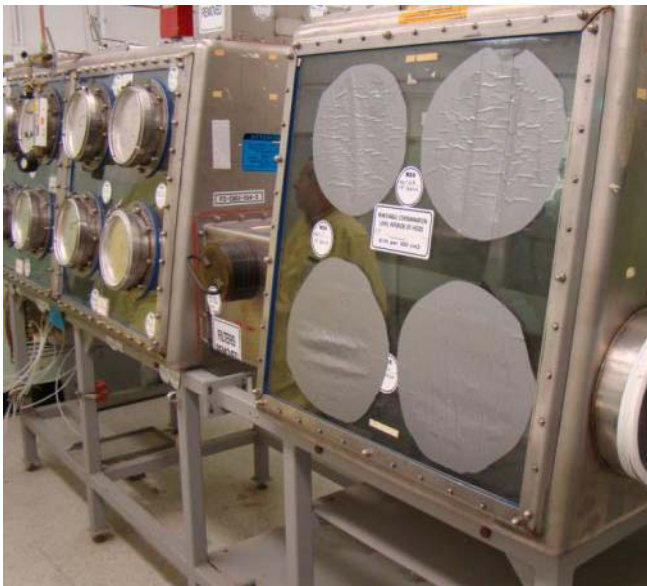
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Recovery Act Highlights

October 2009

- D&D work at Plutonium Finishing Plant, 14 glove boxes or laboratory hoods removed from main building (234-5Z)



Glove boxes in main 234-5Z building prior to removal



Workers use chemicals to decontaminate glove boxes



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Recovery Act Highlights

October 2009

- Demolished superstructures of 2 of 3 spent fuel facilities in 200 North Area, demolishing fuel basins



Workers demolished the 212-R facility (left) and then began demolishing the 212-R basin (right)



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Recovery Act Highlights

October 2009

- D&D of ancillary facilities near K Reactors, removing equipment/debris from K West Reactor Basin



*Removing chlorine vault slab near
K West Reactor (background)*



*K West Basin debris removal: cutting up
long-handled tools*



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Recovery Act Highlights

October 2009

- Installing wells for new 200 West Area groundwater treatment system



CH2M HILL subcontractor Blue Star drilling a well (background) to support groundwater treatment



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Recovery Act Highlights

October 2009

- Expanding disposal facility for cleanup debris, Environmental Restoration Disposal Facility



Washington Closure Hanford subcontractor DelHur Industries excavating 1.5 million cubic yards of soil to build a 9th disposal (super) cell at ERDF



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Recovery Act Highlights

October 2009

- Characterizing one of Hanford's most challenging waste sites in the River Corridor (618-10 Burial Ground)



Aerial view of 618-10 Burial Ground



Taking measurements with a magnetometer



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Recovery Act Highlights

October 2009

- Demolished 15 large chemical tanks near U Canyon



Before



During



After



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Hanford Funding Profile FY 2009 –2010

October 2009

	FY2009 (\$M)	FY2010 (\$M)
Appropriation	2,067.4	TBD
President's Budget Request	1,916.2	2,091.5

American Recovery and Reinvestment Act (FY09-FY11)	1,960.5
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Note: Funding amounts include both Office of River Protection and Richland Operations Office



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Recovery Act Funding

October 2009

- Hanford Site information: www.hanford.gov/recovery
- DOE-RL contractor websites (incl. information on hiring, subcontracting)
 - www.platauremediation.com
 - www.washingtonclosure.com
- U.S. Department of Energy website: www.energy.gov/recovery
- DOE Environmental Management Division website: www.em.doe.gov/emrecovery/EMRecovery.aspx



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